

WHAT IS CLAIMED IS:

1. A titanium-copper alloy having high strength and conductivity as a copper alloy comprising:

three to four percent by mass of Ti,

residual Cu, and

inevitable impurities,

wherein the area percentage (S(%)) of a Cu-Ti intermetallic compound phase observed in a section perpendicular to the rolling direction is represented by the following formula:

$$S(\%) \geq 8.1 \times [Ti] - 17.7$$

where [Ti] represents the Ti content in percent by mass.

2. A titanium-copper alloy according to Claim 1, wherein a conductivity is 16% IACS or more, and 0.2% proof stress is 800 MPa or more.

3. A method of producing a titanium-copper alloy according to Claim 1 or 2 comprising the steps of:

hot-rolling, cold-rolling, solution-treating, cold-rolling, and aging an ingot,

wherein a cold working degree prior to the aging is 15% or more, the aging temperature is from 350°C to 450°C, the aging time is from 5 to 20 hours, and the average cooling

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rate from the aging temperature after the aging to 300°C is
50°C/h or less.